

### ABSTRACT OF THE INVENTION

A method and apparatus for the nondestructive detecting of tension wires in a concrete pole from a single test location without requiring scanning along the length of the pole and without requiring direct contact to the wires. The method and apparatus utilize longitudinal guided waves in tension wires that are generated and detected based on the magnetostrictive sensor principle. The detected signals from broken tension wires and from the ends of concrete pole are analyzed for the number and locations of broken wires.